Release A CDR RID Report

Date Last Modified 10/31/95

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Document 305 Subsystem Design Specifications

Phone No 286-0653

RID ID	CDR	70
Review	SDPS/CSMS	
Originator Ref		
Priority	2	

Section   **Page**   **Figure Table**

Category Name ECS System-Level   **Actionee** ECS

Sub Category

Subject Functional Model not included in Subsystem Design Specifications

Description of Problem or Suggestion:

For a complete design, Rumbaugh's Object Modeling Technique (OMT) development methodology requires development of a functional model, consisting of data flow diagrams and constraints. The functional model typically complements the object and dynamic models and is updated/produced along with these models throughout the development life cycle. The model provides context for interaction and helps provide understanding of functional dependencies. Operations concepts do not yet contain descriptions of functions or functional dependencies. Since function descriptions and dependencies are not currently included in either operations concepts or design specifications, documentation/design is incomplete.

Originator's Recommendation

Provide functional models (functions and functional dependencies) of the subsystems in design documents which can be mapped to functions outlined in the operation concepts.

GSFC Response by: **GSFC Response Date**

HAIS Response by: Jacob Eisenstein   **HAIS Schedule** 9/20/95

HAIS R. E. Richard Meyer   **HAIS Response Date** 10/10/95

Rumbaugh's OMT does not require the development of data flow diagrams; it suggest them where their use helps designers understand the functionality of a design. Indeed, ECS has been advised by its OMT consultants that the development of DFDs is a rare occurrence. The Release A detailed design is broken down to a very fine granularity of objects, making most operations compact or even trivial. Where operations are more complex, it was felt that PDL would be more helpful to the understanding of the design than functional diagrams. The proposed approach then was briefed to and agreed with NASA prior to CDR.

ECS will update the operations scenarios document (DID 605) and will relate the functions in the operations scenarios to the design. The updated DID 605 is scheduled for delivery on December 22, 1995 (see the response to RID #8 for additional details on the DID 605 resubmission).

Status **Closed**   **Date Closed** **10/31/95**   **Sponsor** **Schroeder**

****** **Attachment if any** ******